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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,892	01/17/2002	Heinrich Fissan	0103.084	9090

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EXAMINER	
CHIESA, RICHARD L	

ART UNIT	PAPER NUMBER
1724	7

DATE MAILED: 06/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A8-7

Offic Action Summary

Application No.	Applicant(s)
10/052,892	FISSAN ET AL
Examiner	**Group Art Unit**
RICHARD L. CHIESA	1724

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☑ Responsive to communication(s) filed on April 11, 2002.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☑ Claim(s) 1-22 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☑ Claim(s) 1-22 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☑ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6

☑ Notice of Reference(s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Int rview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Oth r _____

Office Action Summary

DETAILED ACTION

(1.) The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 1724.

Response To Amendment

(2.) The preliminary amendment filed on April 11, 2002 has been entered.

Drawings

(3.) The drawings filed on April 11, 2002 have been approved by the USPTO Draftsperson.

Claim Rejections – 35 USC 112

(4.) Claim 19 is rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claim 19 is indeterminate because there is apparently no antecedent basis for the phrase "said conducting material" bridging lines 1 and 2 of the claim.

Claim Rejections – 35 USC 103

(5.) The following is a quotation of 35 USC 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

(6.) Claims 1-3, and 20-22 are rejected under 35 USC 103(a) as being unpatentable over Hoenig. Hoenig (note Figure 1) discloses an apparatus and process for removing particles from an aerosol with a particle charger 12, permeable grid electrode 28, fractionator section having electrode 6 and cylindrical collector 2A, and a flow splitter 15 substantially as claimed. It would appear that Hoenig may not explicitly state that there is no appreciable change to gas phase composition. However, Hoenig does disclose that ozone production is kept to a minimum for the purpose of reducing the presence of strong oxidants (note col. 5, lines 47-61). Consequently, it would have been readily obvious to one having ordinary skill in the art to avoid gas phase composition change in the Hoenig particle removing method and device in order to eliminate the presence of strong oxidants as suggested by Hoenig.

(7.) Claims 4-8 are rejected under 35 USC 103(a) as being unpatentable over Hoenig in view of Reif. Hoenig, as described above in paragraph 6, shows an apparatus for removing particles from an aerosol substantially as claimed. It would appear that Hoenig may not explicitly disclose the presence of a washing air stream. Reif (note ref. num. 30,

Figure 1, and col. 6, lines 4-17) teaches the well-known use of a washing air stream in an aerosol cleaning apparatus for the purpose of reducing the deposition of dust particles on the corona discharge wire. It therefore would have been obvious to one of ordinary skill in the art to employ a washing air stream in the Hoenig aerosol cleaning apparatus in order to reduce fouling by dust deposition as taught by Reif.

(8.) Claims 13-16, and 18 are rejected under 35 USC 103(a) as being unpatentable over Hoenig in view of Torok et al. Hoenig, as described above in paragraph 6, discloses an aerosol cleaning apparatus substantially as claimed. It would appear that Hoenig may not explicitly disclose laminar flow and a resistor. However, Torok et al (note ref. num. 5, Figures 1-9, 12, 15, and col. 3, lines 23-66) teach the use of laminar flow and a resistor in an aerosol cleaning apparatus for the purpose of reducing ozone production and the presence of contaminants. It would have been obvious to one of ordinary skill in the art to employ laminar flow and a resistor in the Hoenig aerosol cleaning apparatus in order to reduce the presence of ozone and contaminants as taught by Torok et al.

(9.) Claims 9 and 10 are rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 7 in paragraph 7 above, and further in view of Cooke. The prior art as described above in paragraph 7 discloses an aerosol cleaning apparatus substantially as claimed with the apparent exception of the permeable grid electrode surrounding the corona discharge wire. Cooke (note ref. num. 12, 17, Figure 1, and page 1, lines 86-109) teaches the use of a grid electrode surrounding the corona discharge wire in an aerosol cleaning apparatus in order to facilitate gas flow. It would have been

obvious to one of ordinary skill in the art to employ a grid electrode surrounding the corona discharge wire of the prior art aerosol cleaning apparatus in order to optimize gas flow as taught by Cooke.

(10.) Claims 11 and 12 are rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 4 in paragraph 7 above, and further in view of Ilmasti. The prior art, as described above in paragraph 7, discloses an aerosol cleaning apparatus substantially as claimed with the apparent exception of current measurement. Ilmasti (note Figure 7, and col. 2, line 62 to col. 3, line 12) teaches the well-known use of current measurement in an aerosol cleaning apparatus for the purpose of ensuring proper ion production control. It would have been obvious to one of ordinary skill in the art to employ current measurement in the prior art aerosol cleaning apparatus in order to facilitate optimum ion production control as taught by Ilmasti.

(11.) Claim 17 is rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 16 in paragraph 8 above, and further in view of Reif. The prior art, as described above in paragraph 8, discloses an aerosol cleaning apparatus substantially as claimed with the apparent exception of a conductive ring flow splitter. Reif teaches the use of a conductive ring flow splitter in an aerosol cleaning apparatus for the purpose of ensuring the separation of the clean and particle-laden flow streams (note ref. character 26A, and col. 5, lines 24-36). It would have been obvious to one of ordinary skill in the art to employ a conductive ring flow splitter in the prior art aerosol cleaning apparatus in

order to facilitate separation of the clean and particle-laden flow streams as taught by Reif.

(12.) Claim 19, as best understood, is rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 7 in paragraph 7 above, and further in view of Marshall. The prior art, as described above in paragraph 7, discloses an aerosol cleaning apparatus substantially as claimed with the possible exception of silver conducting material. Marshall teaches the well-known use of silver conducting material in an aerosol cleaning apparatus for the purpose of treating gases containing corrosive substances (note page 1, line 90 to page 2, line 59). It would have been obvious to one having ordinary skill in the art to employ silver conducting material in the prior art aerosol cleaning apparatus in order to facilitate the treatment of corrosive gases as taught by Marshall.

Conclusion

(13.) The prior art cited but not applied is considered pertinent to applicants' disclosure. These references have been cited as art of interest to show other electrostatic gas separation systems.

(14.) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Chiesa whose telephone number is (703) 308-3791.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (703) 308-0661.

Facsimile correspondence to Art Unit 1724 must be transmitted through (703) 305-7718. This number is for Art Unit 1724 correspondence only.

Richard L. Chiesa
June 11, 2003

Richard L. Chiesa

RICHARD L. CHIESA
PRIMARY EXAMINER
ART UNIT 1724

June 11, 2003